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**CLAIMS:**

What is claimed is:

1. A method of managing a set of data by a distributed set of services, comprising the steps of:
  - 5 organizing the set of data into a plurality of related sets of data;  
assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria; and
  - 10 responsive to failure of a service within the distributed set of services, transferring management of the related set of data managed by the failed service to another service within the distributed set of services.
2. The method as recited in claim 1, wherein the  
15 optimization criteria is based on location of the service within the distributed set of services.
3. The method as recited in claim 1, further comprising:
  - detecting the failed service by a set of remaining services within the distributed set of services; and
  - 20 examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service.

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4. The method as recited in claim 3, further comprising:  
determining whether data within the related set of  
data are at the same location as a service within the set  
of remaining services; and

5 responsive to data within the related set of data at  
the same location as a service within the set of remaining  
services, attaching the data to the service.

5. The method as recited in claim 1, further comprising:  
responsive to an additional service joining the  
10 distributed set of services, querying management of the  
data within the related sets of data; and  
assigning management of a related set of data to the  
additional service within the distributed set of services  
based on the optimization criteria.

15 6. A method of managing a set of data by a distributed  
set of services, comprising the steps of:  
organizing the set of data into a plurality of  
related sets of data;

20 assigning, by a set of services, management of a  
related set of data to a service within the distributed  
set of services based on an optimization criteria;

responsive to an additional service joining the  
distributed set of services, querying management of the  
data within the related sets of data; and

25 assigning management of a related set of data to the  
additional service within the distributed set of services  
based on the optimization criteria.

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7. The method as recited in claim 6, wherein the optimization criteria is based on location of the service within the distributed set of services.

8. The method as recited in claim 6, further comprising:  
5 detecting a failed service in the distributed set of services by a set of remaining services within the distributed set of services; and

examining, by the set of remaining services within the distributed set of services, the related set of data  
10 managed by the failed service.

9. The method as recited in claim 8, further comprising:  
determining whether data within the related set of data are at the same location as a service within the set of remaining services; and  
15 responsive to data within the related set of data at the same location as a service within the set of remaining services, attaching the data to the service.

10. A data processing system, comprising:  
a system bus;  
20 a memory, including a set of instructions, functionally connected to the system bus; and  
a processing unit functionally connected to the system bus, wherein the processing unit executes the set of instructions from the memory to organize a set of data  
25 into a plurality of related sets of data, wherein the data in each related set of data has at least one attribute between members, the processing unit assigns, by a set of services, management of a related set of data to a service within the distributed set of services based on an

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optimization criteria, and, responsive to a failed service within the distributed set of services, the processing unit transfers management of the related set of data managed by the failed service to another service within  
5 the distributed set of services.

11. A data processing system, comprising:  
a system bus;  
a memory, including a set of instructions,  
functionally connected to the system bus; and  
10 a processing unit functionally connected to the system bus, wherein the processing unit executes the set of instructions from the memory to organize a set of data into a plurality of related sets of data, wherein the data in each related set of data has at least one attribute  
15 between members, the processing unit assigns, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria, responsive to an additional service joining the distributed set of services, the processing  
20 unit queries management of the data within the related sets of data, and the processing unit assigns management of a related set of data to the additional service within the distributed set of services based on the optimization criteria.

25 12. A data processing system for managing a set of data by a distributed set of services, comprising:  
organizing means for organizing the set of data into a plurality of related sets of data, wherein the data in each related set of data has at least one attribute  
30 between members;

10 13. The data processing system as recited in claim 12,  
wherein the optimization criteria is based on location of  
the service within the distributed set of services.

15       detecting means for detecting the failed service by a  
set of remaining services within the distributed set of  
services; and

15. The data processing system as recited in claim 14,  
further comprising:

attaching means, responsive to data within the related set of data at the same location as a service within the set of remaining services, for attaching the data to the services.

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16. The data processing system as recited in claim 12,  
further comprising:

querying means, responsive to an additional service  
joining the distributed set of services, for querying  
5 management of the data within the related sets of data;  
and

assigning means for assigning management of a related  
set of data to the additional service within the  
distributed set of services based on the optimization  
10 criteria.

17. A data processing system for managing a set of data  
by a distributed set of services, comprising:

organizing means for organizing the set of data into  
a plurality of related sets of data;

15 assigning means for assigning, by a set of services,  
management of a related set of data to a service within  
the distributed set of services based on an optimization  
criteria;

querying means, responsive to an additional service  
20 joining the distributed set of services, for querying  
management of the data within the related sets of data;  
and

assigning means for assigning management of a related  
set of data to the additional service within the  
25 distributed set of services based on the optimization  
criteria.

18. The data processing system as recited in claim 17,  
wherein the optimization criteria is based on location of  
the service within the distributed set of services.

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19. The data processing system as recited in claim 17,  
further comprising:

detecting means for detecting a failed service in the  
distributed set of services by a set of remaining services  
5 within the distributed set of services; and

examining means for examining, by the set of  
remaining services within the distributed set of services,  
the related set of data managed by the failed service.

20. The data processing system as recited in claim 19,  
10 further comprising:

determining means for determining whether data within  
the related set of data are at the same location as a  
service within the set of remaining services; and

attaching means, responsive to data within the  
15 related set of data at the same location as a service  
within the set of remaining service, attaching the data to  
the service.

21. A computer program product in a computer readable  
medium for managing a set of data by a distributed set of  
20 services, comprising:

instructions for organizing the set of data into a  
plurality of related sets of data;

instructions for assigning, by a set of services,  
management of a related set of data to a service within  
25 the distributed set of services based on an optimization  
criteria; and

instructions, responsive to a failed service within  
the distributed set of services, for transferring  
management of the related set of data managed by the

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failed service to another service within the distributed set of services.

22. The computer program product as recited in claim 21, wherein the optimization criteria is based on location of  
5 the service within the distributed set of services.

23. The computer program product as recited in claim 21, further comprising:

instructions for detecting the failed service by a set of remaining service within the distributed set of  
10 services; and

instructions for examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service.

24. The computer program product as recited in claim 23,  
15 further comprising:

instructions for determining whether data within the related set of data are at the same location as a service within the set of remaining services; and

instructions, responsive to data within the related  
20 set of data at the same location as a service within the set of remaining services, for attaching the data to the service.

25. The computer program product as recited in claim 21, further comprising:

25 instructions, responsive to an additional service joining the distributed set of service, for querying management of the data within the related sets of data; and



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instructions for assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria.

- 5 26. A computer program product in a computer readable medium for managing a set of data by a distributed set of services, comprising the steps of:

instructions for organizing the set of data into a plurality of related sets of data;

- 10 instructions for assigning, by a set of services, management of a related set of data to a service within the distributed set of services based on an optimization criteria;

- 15 instructions, responsive to an additional service joining the distributed set of services, for querying management of the data within the related sets of data; and

- 20 instructions for assigning management of a related set of data to the additional service within the distributed set of services based on the optimization criteria.

27. The computer program product as recited in claim 26, wherein the optimization criteria is based on location of the service within the distributed set of services.

- 25 28. The computer program product as recited in claim 26, further comprising:

instructions for detecting a failed service in the distributed set of services by a set of remaining services within the distributed set of services; and

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instructions for examining, by the set of remaining services within the distributed set of services, the related set of data managed by the failed service.

29. The computer program product as recited in claim 28,  
5 further comprising:

instructions for determining whether data within the related set of data are at the same location as a service within the set of remaining services; and

10 instructions, responsive to data within the related set of data at the same location as a service within the set of remaining services, for attaching the data to the service.

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